

SUBSTITUTE SPECIFICATION

DEC 13 2001

TITLE OF THE INVENTION

A METHOD FOR PROVIDING ADVERTISEMENT INFORMATION AND

APPARATUS THEREFOR

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a method of providing advertisement information and an apparatus therefor. More particularly, the invention relates to a method of and an apparatus for providing suitable services to a commercial sponsor and viewers by sending advertisement information by radio transmission via satellite or terrestrial radio transmission.

[0002] In the conventional broadcasting of an advertisement provided by a private broadcaster, the same program and advertisement have been sent alternately in terms of time to all viewers, independently of whether the viewers are interested in them or not, and the received advertisement has been played by the viewer.

[0003] To solve this problem, a broadcasting receiver has been considered in which advertisements alone are stored in advance, and those advertisements conforming to the taste of the individual viewers are selected from them and are played. Such a receiver is disclosed in Japanese Application Patent Laid-Open Publication No. Hei 11-55636, for example.

[0004] However, there is no way for commercial sponsors to know whether the advertisement provided by them is being watched by viewers or not. The advertisement charge is determined by the program viewership and broadcasting time,

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and sponsors have often been forced to pay charges not conforming to the actual viewing time of the advertisement.

## SUMMARY OF THE INVENTION

[0005] The object of the present invention is to provide a means for promoting an advertisement to be watched by viewers and for collecting appropriate advertisement charges by allowing sponsors to determine the type of advertisement which conforms to the taste of the viewers.

[0006] The above object of the present invention can be attained by sending advertisement information by radio transmission via satellite or terrestrial radio transmission, receiving history information from the broadcasting receiver that has played the advertisement information and calculating the advertisement charge to be paid by a sponsor on the basis of the received history information.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0007] Fig. 1 is a diagram representing a system representing a first embodiment of the present invention;

[0008] Fig. 2 is a diagram representing a business relationship used in first embodiment shown in Fig. 1;

[0009] Fig. 3 is a block diagram representing the system configuration of a commercial sponsor, advertisement administration firm and program provider according to the first embodiment of the present invention;

[0010] Fig. 4 is a flow diagram representing the business relationship among a commercial sponsor, advertisement administration firm and end user;

[0011] Fig. 5 is a diagram representing the business relationship wherein

an information receiver terminal with advertisement stored therein in advance is distributed according to the first embodiment of the present invention;

[0012] Fig. 6 is a flow diagram representing the business relationship wherein advertisement is published, updated and deleted among a commercial sponsor, advertisement administration firm and end user;

[0013] Fig. 7 is a block diagram representing the system configuration of an advertisement administration firm according to the first embodiment of the present invention;

[0014] Fig. 8 is a block diagram of a broadcasting receiver terminal according to the first embodiment of the present invention;

[0015] Fig. 9 is a diagram representing a business relationship according to a second embodiment of the present invention;

[0016] Fig. 10 is a diagram representing a business relationship according to a third embodiment of the present invention;

[0017] Fig. 11 is a diagram representing a business relationship according to a fourth embodiment of the present invention;

[0018] Fig. 12 is a diagram representing a business relationship in the form of free broadcasting with advertisement or paid broadcasting without advertisement;

[0019] Fig. 13 is a diagram representing a business relationship in the form of free broadcasting with advertisement or paid broadcasting without advertisement;

[0020] Fig. 14 is a diagram representing an example of an indication on a

display in one embodiment according to the present invention;

[0021] Fig. 15 is a diagram representing another example of an indication on a display in one embodiment according to the present invention;

[0022] Fig. 16 is a diagram representing still another example of an indication on a display in one embodiment according to the present invention;

[0023] Fig. 17 is a diagram representing an example of playing data on the information receiver terminal in an embodiment according to the present invention;

[0024] Fig. 18 is a flow diagram representing an example of entering the level of interest into the information receiver terminal in an embodiment according to the present invention;

[0025] Fig. 19 is a flow diagram representing an example of selecting and entering advertisement information into the information receiver terminal in a embodiment according to the present invention;

[0026] Fig. 20 is a flow diagram representing an example of selecting and entering advertisement information into the information receiver terminal in another embodiment according to the present invention;

[0027] Fig. 21 is a flow diagram representing an example of selecting and entering advertisement information into the information receiver terminal in still another embodiment according to the present invention;

[0028] Fig. 22 is a flow diagram representing an example of selecting and entering advertisement information into the information receiver terminal in a further embodiment according to the present invention;

[0029] Fig. 23 is a flow diagram representing an example of selecting and

entering advertisement information into the information receiver terminal in a still further embodiment according to the present invention; and

[0030] Fig. 24 is a diagram representing how to determine the order of play.

#### DETAILED DESCRIPTION OF THE INVENTION

[0031] Various embodiments according to the present invention will be described with reference to the drawings.

[0032] Fig. 1 is a diagram of a system representing a first embodiment of the present invention.

[0033] The present embodiment relates to a situation involving the following three parties: a sponsor 110 desiring to publicize an advertisement 108, an advertisement administration firm 112 which operates to broadcast the advertisement 108 for the sponsor, and a end user 120 which receives and views the broadcast 142 containing the advertisement via satellite or the like.

[0034] Fig. 2 is a diagram representing the business relationship according to the present embodiment. The present embodiment is a form of business which provides a means for an economical rental of receiver terminal 150 by the end user 120 viewing the advertisement. More specifically, a rental contract for use of the receiver terminal 150 is signed between the advertisement administration firm 112 and the end user 120 based on a certain advertisement view rating. If the advertisement view rating fails to meet a specified condition, the rental charge is transferred to the next month. If the watch rating has exceeded a certain level, a discount is applied to the rental charge as an incentive.

[0035] The following description concerns the flow of business. An advertisement administration firm 112 calling for advertisement information. Informed of this call and desiring to publicize advertisement, a commercial sponsor 110 provides advertisement information to the advertisement administration firm 112 (Step 201). The information can be provided via a cable communications line including the Internet, ISDN (Integrated Services Digital Network), DSL (Digital Subscriber Line), or fiber-optic cable, radio communications, or recording media, including CD-ROM. In this case, an agreement may be signed between the advertisement administration firm and commercial sponsor regarding the term of validity of the advertisement, the method for advertisement charge calculation or the like.

[0036] The advertisement administration firm 112 signs a specified agreement with an end user 120 desiring to rent a terminal as well (Step 202). For example, a one-month rental agreement is signed, and a rental charge for viewing the advertisement, consisting of a specified amount and time of data reception, is paid in advance (Step 203). The type of the advertisement to be viewed and timing can be set by the end user 120 as desired.

[0037] At the time of this agreement, the end user 120 provides personal information to the advertisement administration firm (Step 204). For example, it provides such personal information as the address, name, age and telephone number of the end user, as well as the field of the product, the name of the company and name of the television personality as required. Furthermore, information on general hobbies is also provided in some cases, if the end user agrees. As more information is provided, the rental charge is reduced or the end user can specify the information which may be

disclosed.

[0038] After this agreement has been established, a new IC card is issued on which the user ID or the like is recorded. This is used for user identification when the terminal is used. IC cards including the already issued CAS card (a card intended for conditional access) are updated to view the paid broadcasting channel.

[0039] The advertisement administration firm 112 takes charge of the administration of the personal information provided. At the request of commercial sponsor 110, it may provide the personal information (Step 206). In this case, the personal information provided is determined based on the agreement with the end user 120. A communications line or recording media such as CD-ROM can be used to send personal information. Furthermore, every time personal information is obtained, it can be supplied to commercial sponsor 110. Or multiple pieces of personal information can be provided collectively at a certain interval. Furthermore, it is preferred to provide not only the information for personal identification, but also information that has been edited into statistic information. However, if information for personal identification and more detailed information can be provided according to the agreement with the end user, such information is sent to the commercial sponsor 110.

[0040] The commercial sponsor 110 pays the price for the amount and quality of the received personal information to the advertisement administration firm 112 (Step 207). It is also possible to make sure that the user information can be provided if the price is paid, even when the commercial sponsor does not provide information. Payment can be made by allowing such a price to be included in the advertisement charge.

[0041] According to the present embodiment, advertisement information is sent to the end user 120 after payment of the user information supply charge by commercial sponsor 110. It is also possible to request the advertisement administration firm 112 to send advertisement information alone, without user information being supplied.

[0042] The advertisement administration firm 112 sends advertisement information to the end user 120 by broadcasting (Step 208), terrestrial radio transmission, or satellite broadcasting. A satellite on a highly elliptical orbit in particular is used as a means of broadcasting. This advertisement information can be received and viewed without using the terminal by rental.

[0043] The receiver terminal 150 possessed by the end user 120 receives advertisement information and records it on a hard disk in the form of an advertisement storage data file. The end user can select a desired one from the recorded advertisements and play it. However, when the advertisement assigned in advance is to be played by replacement, the original advertisement is required to be the advertisement of the advertisement administration firm.

[0044] When an advertisement has been played, the commercial sponsor, content, classification and time of play of the played advertisement are recorded and stored on the hard disk.

[0045] The history of played advertisements stored in the receiver terminal 150 is sent to the advertisement administration firm 112 by uplinking (144) via the satellite used for the broadcasting receiver (Step 209). The history can also be sent to the advertisement administration firm via the Internet on a wired communications line, in

addition to uplinking via a satellite.

[0046] The advertisement administration firm 112 sorts out the received histories for each commercial sponsor or advertisement, and edits it into statistical information on the number of viewers, viewing rating and average viewing time per person. Based on this statistical information, an advertisement charge paid by the sponsor is calculated, and a bill is sent to the sponsor together with the statistical history information (Step 210). In this case, a bill or its CD-ROM may be sent by mail or wired, or a wireless communications line may be used.

[0047] After that, the commercial sponsor 110 pays advertisement charges to the advertisement administration firm 112 (Step 211). One month after the signing of the agreement, a discount of the rental charge or other privileges are awarded to the end user 120 as an incentive by the advertisement administration firm 112 if advertisement information has been viewed in excess of an amount determined in advance (Step 212). If viewing of the advertisement information fails to reach a specified level, that amount is added to the rental charge and is paid in the next month based on the agreement. Needless to say, deferred payment of the rental charge can be employed so that an actual rental charge reflecting the advertisement viewing is paid by the end user 120 every month.

[0048] A detailed embodiment of the present invention will be described with reference to the drawings. According to this embodiment, an advertisement created by the commercial sponsor 110 is sent to the receiver terminal 150 of the end user 120 through the advertisement administration firm 112 and is viewed. The viewing history of the end user 120 and information on the end user are collected by the advertisement

administration firm and are sent to the commercial sponsor 110.

[0049] Fig. 3 shows an example of the system configuration. This embodiment indicates the system configurations of a commercial sponsor 110, advertisement administration firm 112 and program provider 111. The advertisement 108 created by the commercial sponsor 110 and desired to be publicized is stored in the advertisement server 354 of the advertisement administration firm 112 via the transmission means 104. The transmission means 104 used here can be a wired or wireless telecommunications path or a recording medium, such as a CD-ROM. At the request of the commercial sponsor 110, the advertisement administration firm 112 determines the user to whom advertisement is distributed at the advertisement administration division 356 according to the user information stored in the user information server 362 administered by a user information administration division 358. For the user to whom an advertisement is distributed, the advertisement administration division 356 transfers the advertisement stored in the advertisement server 354 via the transmission line A 402 and stores it in the storage unit, such as a hard disk in the receiver terminal 150 as an advertisement data file 414. Broadcasting by satellite or terrestrial radio transmission, communications by satellite or terrestrial radio transmission, a ground line, such as an optical fiber cable, ISDN, DSL, or telephone, or the Internet is used as the transmission line A 402 for this advertisement distribution. The program stored in the program server 364 is sent from the program provider 111 to the receiver terminal 150 by the transmission line C 404, the same transmission line as the transmission line A 402 or different from it. This program is stored in the storage unit, such as a hard disk in the receiver terminal 150 as a program data file 408.

[0050] When an end user wants to view the receiver terminal 150, he is checked by an IC card 482 (Fig. 8) to see if he is authorized to get information or not. At the same time, user information such as the ID, age and sex of the end user is input into the broadcasting receiver terminal. More detailed information of the end user can be input and set by the remote control 480 or touch panel 450. When the end user is different from the IC card owner, the remote control 480 or touch panel 450 is also used for input and setting of information. User information input and setting include information on tastes and hobbies in advertisement viewing which is used for setting choices in advertisement viewing. Based on this setting, user information and advertisement viewing information are input into the interest storage 444. When the end user views the program recorded in the program data file 408, the advertisement suited to the user's taste is selected by the interest comparator 442 from multiple advertisements stored in the advertisement data file 414, and this advertisement is played during viewing of the program whenever appropriate and is indicated on the display 152 via the indicator 432. In this way, the user can view the program with the advertisement.

[0051] This advertisement is shown on the display 152 through indicator 432 when the receiver terminal 150 has started, when the program has been downloaded or when radio frequency interference has occurred due to a drop in reception level.

[0052] Another more detailed embodiment of the present invention will be described with reference to the drawings. This example shows a process flow of the leasing of an information receiver terminal and supply of statistic user information among the commercial sponsor, advertisement administration firm and end user.

[0053] In Fig. 4, the advertisement administration firm 112 issues an IC

card 482 (Step 370) and signs a rental agreement for lease of an information receiver terminal with an end user 12 (Step 371). When or after the end user 120 has received the information receiver terminal, an application form for this agreement is sent or distributed to the end user by the advertisement administration firm 112. Then, the end user 120 will fill out this application form (Step 373) and send it to the advertisement administration firm 112 (Step 374) to be accepted (Step 375). After that or in parallel with that, the user profile of the end user 120 is sent to the advertisement administration firm 112 and is registered as an individual file (Step 377). The registered individual profile is separated into two types of information; one is personal information which can identify the individual, and the other is statistical information which cannot (Step 378). They are independently recorded (Steps 379 and 380). The advertisement administration firm 112 issues an IC recording the user ID corresponding to the user based on the registered information, or matching is found between the IC card created in Step 370 and user information. The information receiver terminal 150 matched with the IC card is sent to the end user. When it is accepted by the end user, the lease agreement starts. Of the multiple individual pieces of information registered, the statistical information which can not identify the individual is processed by the advertisement administration firm 112 at the request of user information supplied by the commercial sponsor 110 (Step 381), and the statistical user information is sent to the commercial sponsor 110 (Step 382). The commercial sponsor 110 receives the statistical user information and makes a payment to the advertisement administration firm 112 (Step 385).

[0054] Still another detailed embodiment of the present invention will be described with reference to the drawings. According to this embodiment, the information

receiver terminal where an advertisement is stored in advance is given to an end user, or a commercial sponsor acquires a statistical individual user profile. After advertisement expenses have been received from the commercial sponsor, the information receiver terminal displays the advertisement.

[0055] In Fig. 5, an advertisement administration firm 112 signs a specified agreement with an end user 120 desiring to lease a terminal (Step 202). Subsequently, or simultaneously with the agreement, the end user 120 supplies an individual user profile containing personal information to the advertisement administration firm 112 (Step 522). The advertisement administration firm 112 leases the information receiver terminal 150 with advertisement 150 stored therein to the end user 120, or supplies it free of charge, depending on the case (Step 205). The advertisement administration firm 112 processes the statistical user profile and sends the statistical user profile to the commercial sponsor 110 (Step 524).

[0056] The commercial sponsor 110 pays the user information supply charge to the advertisement administration firm 112 for the acquisition of the statistical user profile (Step 207). The commercial sponsor 110 having evaluated this statistical user profile requests the advertisement administration firm 112 to publicize the advertisement (Step 526), and pays the advertisement publication expenses 528 for display of the advertisement 108 stored in the information receiver terminal 150 (Step 528).

[0057] The advertisement administration firm 112 sends to the information receiver terminal 150 possessed by the end user, the advertisement display command signal for allowing advertisement to be displayed, and the advertisement sent thereafter is stored and displayed (Step 530).

[0058] Then, the commercial sponsor 110 requests the advertisement administration firm 112 to update the advertisement (Step 532), and pays advertisement updating expenses for updating the advertisement (Step 534). The advertisement administration firm 112 sends new advertisement information to the information receiver terminal 150 in order to update the advertisement stored in the information receiver terminal 150 possessed by the end user (Step 536).

[0059] A further detailed embodiment of the present invention will be described with reference to the drawings. This embodiment concerns a flow of publication, updating and deletion of advertisement among the commercial sponsor, advertisement administration firm and end user.

[0060] In Fig. 6, the advertisement administration firm 112 requests the commercial sponsor 110 to publicize or update the advertisement (Step 540). When this request is accepted, publication or updating of the advertisement is consigned to the advertisement administration firm 112 (Step 542). The commercial sponsor 110 sends the advertisement data to be publicized to the advertisement administration firm 112 (Step 544) and the advertisement administration firm registers this advertisement in the advertisement server (Step 546). The commercial sponsor 110 makes a payment to the advertisement administration firm for publication of the advertisement (Step 548) and the advertisement administration firm accepts it (Step 550). The advertisement registered in the advertisement server (Step 552) is recorded in advance as an advertisement data file 414 in a new information receiver terminal 150 to be leased to the end user, before it is leased to the end user. In the phase (Step 205) of leasing the information receiver terminal 150 to the end user, as shown in Fig. 5, an advertisement is stored in the

information receiver terminal 150 in advance, as described above. The information receiver terminal 150 with the advertisement recorded therein is leased to the end user (Step 556) and the end user accepts it (Step 558). The end user enters and sets personal information, such as age and sex, as well as related information into the user terminal. Product groups, companies and advertisement performers, the viewing of which are not liked or disliked are set up (Step 560). Based on this setting, the programs containing the advertisement which the viewer wants to watch are viewed (Step 562). At the request of the commercial sponsor 110, the advertisement administration firm 112 adds or updates the advertisement data file 414 stored in the information receiver terminal 150 already distributed to the end user (Step 566). This updating is performed via the transmission line (Step 564). Furthermore, from the information receiver terminal 150, the advertisement administration firm 112 deletes the data file 414 of the advertisement whose publication term has already expired (Step 568). This deletion is carried out via the transmission line or automatically by the calendar function in the user terminal when the term of publication has expired (Step 570).

[0061] The following description is directed to the systems on the side of the advertisement administration firm and end user and the processing flow thereof.

[0062] Fig. 7 shows a system as one example of the advertisement administration firm. This system comprises, as a receiver 302, at least one radio receiver for receiving the information sent through a wired communications line, such as the Internet, ISDN, DSL, or optical fiber cable or a wireless means, such as satellite transmission or terrestrial radio transmission. The details are described below.

[0063] The receiver 302 for receiving personal information of the end

user 120 has an antenna for receiving radio transmissions from the satellite. In order to receive the personal information of the user 120, the receiver 302 has a receiver circuit for receiving the information sent from the information receiver terminal 150 via the network, such as the Internet, and a recording medium read-out circuit for reading the recording medium, such as a CD-ROM storing the advertisement information sent from the commercial sponsor 110.

[0064] History information, personal information and advertisement information received by the above-mentioned receiver are stored in the recording circuit, such as a hard disk, as a personal history data file 306, individual user data file 304 and advertisement information data file 330, respectively, from time to time.

[0065] Based on the information recorded in the personal history data file 306, the statistic history information creation division 308 files the information in order to get the statistic history information which maintains individual privacy without allowing the individual to be identified, and records the statistic history data file 310 into the recording circuit, such as a hard disk.

[0066] Similarly, based on the information stored in the individual user data file 304, the statistic user information creation division 312 files the information in order to get the statistic history information which maintains individual privacy without allowing the individual to be identified, and records it as a statistic user data file 314 into the recording circuit, such as a hard disk.

[0067] Every time new information is received, these data files are stored after having been filtered, and data file information is sent to the commercial sponsor on a periodic basis. Furthermore, it can be supplied at the request of the commercial sponsor

whenever necessary, or at a certain period of time every month. Old information can be deleted or overwritten. Alternatively, it can be stored and used as cumulative statistical information or annual statistical information.

[0068] For each commercial sponsor or for each type of advertisement, the statistical history information contained in the statistical history data file contains at least information on the number of people having played the information in a certain time period and the total hours spent for play. Whenever required, there can be additional information on the average viewing hour per person, viewing rate and the percentage of the people viewed.

[0069] The statistical user information stored in the statistical user data file contains the age, sex and residential area of the end user 120 in terms of statistic percentage, and the field of users' interest in terms of statistical percentage, as well as information on the end user having approved of the providing personal information.

[0070] This system is preferred to have a statistical overall information creation division 316. Based on the individual user data file 304 and personal history data file 306, this statistical overall information creation division 316 uses the statistical history information and individual user information stored in the data file to edit and create the advertisement trend information which indicates the type of the users watching the relevant advertisement. This information is recorded in the recording circuit in the form of a statistical overall data file 318.

[0071] Information recorded in the statistical history data file 310 is used to calculate the advertisement charge in the advertisement expense computation division 320. More specifically, it is used to calculate the charge proportional to the total play

time of all viewers for one month, for example, for each commercial sponsor or for each type of advertisement. Actually, it is also possible to perform calibration by assigning appropriate weights based on information on the amount of advertisement information and the number of viewers in addition to the play time.

[0072] The transmission data selection division 322 extracts the information recorded in the statistical user data file 314, statistical overall data file 318 and statistical history data file 310 for each commercial sponsor, and sends it to the transmitter 324. Furthermore, with consideration given to the contents of the agreement signed between the end user 120 and the commercial sponsor 110, the information stored in individual user data file 304 and the personal history data file 306 are sent to the commercial sponsor 110 only when approved by the end user 120, depending on the terms of the agreement.

[0073] The transmitter 324 adds information extracted by the transmission data selection division 322 to the information on the charge calculated by advertisement expense computation division 320, and sends it to the commercial sponsor. In this case, a charge statement is mailed to the commercial sponsor, or is transmitted by a wireless means or communications network, including the Internet.

[0074] Based on the specified broadcasting schedule, the information recorded in the advertisement information data file 330 is broadcast by the broadcasting administration division 332 through the uplink unit 114 by means of a broadcasting system 334, such as broadcasting satellite 100. The broadcasting schedule is determined by priority setting; for example, the advertisement with a high viewing rate or one requested by the commercial sponsor 110 is broadcast on a priority basis. When the time

limit for advertisement publication is specified by the commercial sponsor 110, the information is sent together with advertisement information.

[0075] The present invention is also provided with a system for editing the advertisement of the advertisement administration firm 112 itself and providing it to general broadcasting stations, although this is not illustrated. This advertisement is broadcast in a form in which it is inserted between general broadcasting programs. This enables the end user 120 to watch the advertisement by replacing it with others at the terminal.

[0076] Fig. 8 shows an example of the broadcasting receiver terminal used by the end user. This terminal comprises a receiver A 402 and receiver B 404 containing antennas for receiving satellite broadcast such as BS/CS digital broadcasting. It is used to receive such things as paid or free programs, as well as advertisement information.

[0077] To cope with storage-based broadcasting, the received program information is recorded and stored in the recording circuit, such as a hard disk, as a program data file 408 through the program administration division 406. The advertisement information is also recorded and stored in the recording circuit, such as a hard disk, as an advertisement data file 414 through the advertisement administration division 412. The received advertisement information has a function of automatically deleting the stored advertisement information in conformity to the term of validity specified in advance or the command from the calendar of the terminal 150 or the clock circuit (not illustrated).

[0078] The program read-out 420 plays the programs stored in the

program data file 408 as specified by a remote control 480. However, when the program read-out 420 has detected a portion allowing insertion of an advertisement, the reading of the program is stopped, and it is sent to a data multiplexing division 428, together with the advertisement obtained through an advertisement insertion administration division 424. The multiplex data is decoded at the player 430 and is displayed on the screen of the indicator 432.

[0079] The portion allowing insertion of an advertisement is preferably provided with an advertisement of the advertisement administration firm. It can be sent when the advertisement contracted in advanced or an advertisement insertion tag has been detected. The advertisement insertion tag is an advertisement identifier assigned to the header of a program data packet 652, and includes information concerning time. As shown in Fig. 17, an advertisement can be inserted during this time as desired. If the advertisement is not inserted in the program stored in the program data file 408, the advertisement can be inserted when the image is switched or the timer is set. An advertisement can be played during the time of conditional access for decoding the coded program information. Further, it can be played when the terminal is started up, when radio frequency interference has occurred, when a menu including electronic program list is displayed or when a program recorded in advance is searched.

[0080] When an advertisement stored in advance is played, part of the screen or voice alone can be played. In this case, the amount of data, as well as the time of play, must be stored. Fig. 14 shows an example where advertisement 624 is inserted and displayed when the information of a movie B in the program guide 626 is selected and outputted on the display screen 620.

[0081] The advertisement insertion administration division 424 extracts the information of a higher level of interest from the advertisement stored in the advertisement data file 414 through the advertisement read-out division 426. Whether information is of a higher level of interest or not is determined by the interest comparator 442 according to information concerning the level of interest stored in the interest storage 444. The information stored in the interest storage 444 is stored in advance by input means, such as the touch panel 450 or remote control 480, or the IC card 482.

[0082] How to input the level of interest using the touch panel 450 or remote control 480 will be described with reference to Figs. 15 and 16.

[0083] In the display screen 620 shown in Fig. 15, the interest level 632 is changed for each advertisement product classification 634, and it is set by Determine 636. Although not illustrated, it is also possible to input an initial screen 638 and to display a screen for setting the interest level for each actor of the advertisement or each company as a commercial sponsor.

[0084] Fig. 16 shows an example of the screen for checking the level of interest regarding more detailed information on product classification 634. The level of interest can be set automatically for each product classification by inputting the entry.

[0085] Fig. 18 indicates a processing flow showing how to enter the level of interest. The level of interest can be set with consideration being given to the history of advertisements and programs viewed so far, in addition to the information entered by the viewer.

[0086] Referring to Fig. 19, the processing by interest comparator 442 for selecting the advertisement of a higher level of interest, using the information on the

level of interest stored in the interest storage 444 according to the method discussed above, will be described.

[0087] Information on the level of interest is read out from the interest storage 444 (Step 741) and the advertisement related data is extracted from the advertisement data file 414 (Step 742).

[0088] As shown in Fig. 24, weight is assigned to each item by multiplying the read level of interest by a certain coefficient for each related information item for each commercial sponsor. The top priority is given to the item having the greatest total. The related information items include a product classification, performer, manufacturer and season. In this way, priority is determined for each advertisement.

[0089] If advertisement insertion timing is detected by the above discussed advertisement insertion tag or the like, advertisements to be played are selected in the order of priority. The advertisement in question is played by the advertisement read-out division 426. After play of the advertisement of the lowest priority, the order goes back to the advertisement of the top priority, and advertisements are played in the descending order of priority. The above-mentioned step is repeated hereafter. When the viewing of a program has come to an end, the history of watching the program and advertisement is stored in the viewing history data file 422.

[0090] Fig. 20 shows a processing flow representing advertisements that are higher than a certain order being played repeatedly, instead of all stored advertisements being played. Otherwise, Fig. 20 is the same as Fig. 19.

[0091] In Fig. 21, advertisements higher than a certain order are played repeatedly in the same way as in Fig. 20. When the number of repetition loops has

exceeded a specified level, play is repeated in the same procedure after the order of play is lowered.

[0092] Fig. 22 shows a processing flow representing the play of random advertisements from advertisements of a certain order. In this case, the already played advertisements must be recorded to avoid continued play of the same advertisement. In this way, after all the advertisements higher than a certain order have been played, advertisements selected from the advertisements of lower order are played at random.

[0093] Fig. 23 shows a case of random selection from the stored advertisements without any order being assigned to advertisement play. It shows that the advertisements in excess of the total of specified weights are played. In this case, the already played advertisements must be recorded temporarily in order to avoid continued play of the same advertisement.

[0094] From the stored viewing history, the history administration division 452 selects the advertisement viewing history for a certain time period and sends it to the uplink unit 454. It can be sent collectively every month by the operation of the end user, or it can be sent from time to time or automatically by the terminal for every play of the advertisement.

[0095] The advertisement viewing history is sent to the advertisement administration firm by an information transmission function for the satellite provided on the uplink unit 454. Preferably, a satellite on a highly elliptical orbit capable of two-way communications is used. However, it also can be sent by a network, such as the Internet.

[0096] The system of this terminal can be a terminal for real-time broadcasting without meeting the requirements of storage-based broadcasting, where the

terminal is provided with only a receiving antenna for terrestrial radio transmission according to the form of use. When sending the history from time to time, the history need not be stored in the terminal.

[0097] An example of other business relationships according to the present invention will be described.

[0098] Fig. 9 shows a form of business where the end user 120 receives such privileges as coupons or points from the commercial sponsor by viewing an advertisement.

[0099] The system according to the present embodiment is basically the same as that of the above-mentioned first embodiment. Thus, only the differences from the first embodiment will be described.

[0100] For the end user 120 to get points and other privileges, a specified contract must be signed. A privilege service contract is signed between the advertisement administration firm 112 and end user 120 (Step 502). However, to sign this contract, it is essential to have a broadcasting receiver terminal for storing an advertisement. An end user 120 without this contract can view this advertisement, but the privilege as one of the services of the advertisement administration firm is not granted even when the play history is returned to the advertisement administration firm 112.

[0101] The contract can be concluded by mailing a contract form or by e-mailing via a communications line. In the former case, the user receives a contract form from the sales representative when purchasing the terminal at a sales representative, or receives it by mail. Or, the contract form enclosed in the terminal package can be used. The contract form is filled out and mailed at the time of purchase or on a later date.

[0102] Such privileges as coupons and points are preferred to be granted electronically. For example, they are recorded on the IC card 482 on the side of the terminal. These privileges can be issued by the advertisement administration firm 112 on behalf of the commercial sponsor 110, and use of such privileges can be shared among the products of various commercial sponsors.

[0103] Another example of other business relationships according to the present invention will be described.

[0104] Fig. 10 shows an embodiment where a broadcaster also serves as an advertisement administration firm 112. It shows a form business wherein a discount is applied to the paid broadcasting viewing charge as an incentive as a result of the end user 120 having watched an advertisement.

[0105] The system according to the present embodiment is basically the same as that of the above-mentioned first embodiment. Thus, only the differences from the first embodiment will be described.

[0106] The position of the broadcaster in the present embodiment is almost the same as that of the advertisement administration firm in the first embodiment. The space for replacement of the advertisement on the terminal side and broadcasting of a program guide is provided between the self-broadcast programs.

[0107] A specified contract must be concluded in order for the end user 120 to be entitled to a discount of the broadcasting viewing charge. Thus, a viewing discount service contract is concluded between the broadcaster 612 and end user 120 (Step 602). To sign this contract, it is necessary to own a broadcasting receiver terminal for storing advertisements, similarly to the case of the above-mentioned embodiment. An

end user 120 without this contract can view this advertisement, but services of the broadcaster 612 are not granted even when the play history is returned to the broadcaster 612.

[0108] The contract is concluded by mailing or via a communications line, as described above. The discount applied to the broadcasting viewing charge (Step 603) as an incentive is provided by obtaining the discount conditions based on the advertisement information viewed at a certain interval in a month, and by requesting the viewing charge to be paid by the end user in the following month as the amount resulting from deduction of the discount amount, or by reimbursing that amount as a discount of the viewing charge in cash.

[0109] Still another example of other business relationships according to the present invention will be described.

[0110] Fig. 11 shows the form of business where the advertisement administration firm sells to the end user the broadcasting receiver terminal, which is cheaper as determined by the advertisement viewing charge.

[0111] The system according to the present embodiment is basically the same as that of the above-mentioned first embodiment. Thus, only the differences from the first embodiment will be described.

[0112] In the present embodiment, the advertisement administration firm 112 collectively purchases the information receiver terminal 150 from the manufacturer 710 (Step 712) and transfers it to the end user 120 at a cheaper price. The price difference is covered by the advertisement charge from the commercial sponsor 110 paid by the end user for viewing the advertisement.

[0113] A specified contract is required for the end user 120 to get an economical information receiver terminal 150. A terminal transfer contract is concluded between the advertisement administration firm 112 and the end user 120 (Step 702). In this case, transfer of the information receiver terminal 150 to the end user 120 is effected on condition that services cannot be canceled for a certain time period. In some cases, it is sold more economically to the end user 120 by the manufacturer 710, serving also as an advertisement administration firm 112, and by storing the advertisement of its own products in the terminal in advance.

[0114] A further example of other business relationships according to the present invention will be described.

[0115] Fig. 12 shows an embodiment according to the present invention, where the information receiver terminal is used by the end user selecting whether the same program is viewed as a free broadcast with advertisement or as a paid broadcast without advertisement.

[0116] The embodiment in Fig. 12 is the same as that of Fig. 5 up to the point where new advertisement information is sent to the information receiver terminal 150 by the advertisement administration firm 112 (Step 536).

[0117] After that, the end user 120 uses the remote control 480 or touch panel 450 of the information receiver terminal 150 to enter the command which indicates that the end user desires paid broadcasting for watching the program without viewing the advertisement (Step 537). Then, the end user 120 uses the information receiver terminal 150 to send to the advertisement administration firm 112 the command that the paid viewing charge be paid from a specified bank account (Step 538).

[0118] The advertisement administration firm 112 pays to the commercial sponsor 110 the charge for the unwatched advertisement when the advertisement is not viewed (Step 539).

[0119] Still another more detailed embodiment of the present invention will be described with reference to Fig. 13.

[0120] Fig. 13 is a diagram representing the business relation of the embodiment. It is the same as Fig. 12 up to the point where the end user 120 receives the terminal where an advertisement has been stored (Step 558).

[0121] After the end user 120 has received the information receiver terminal 150, he determines if the program is to be watched for pay or not (Step 572). When he had determined to view the program without advertisement by paying a specified charge, he reports to the advertisement administration firm 112 that he wants to use paid viewing. In this case, use of the information receiver terminal 150 allows this communication to be sent to the advertisement administration firm 112 from the information receiver terminal.

[0122] After the advertisement administration firm 112 has received the viewing charge from the end user 120 for viewing the program on a paid basis (Step 574), the advertisement administration firm 112 calculates the amount of the charge for the unwatched advertisement to be returned to the commercial sponsor when the advertisement is not viewed (Step 576), and pays it back to the commercial sponsor 110 (Step 578).

[0123] For the end user 120 that has agreed to view the advertisement, the advertisement administration firm 112 adds a new advertisement to the advertisement

data file 414 already distributed to the end user and recorded on the information receiver terminal 150, and updates it at the request of the commercial sponsor 110 (Step 580). This updating is carried out via the transmission line (Step 584). The advertisement administration firm 112 deletes data file 414 for an advertisement that is past the term of validity for publication from the information receiver terminal 150 having been distributed to the end user (Step 588). In this case, the date file is deleted through the transmission line or automatically by a calendar function built in the user terminal when the term of validity for publication has expired (Step 586).

[0124] In the embodiments discussed above, the information transmission line mainly used for transmission and reception has been an information transmission line using a satellite. However, the transmission line used is not restricted thereto. A communications line including the Internet, ISDN, DSL, or optical fiber cable, terrestrial radio transmission, satellite or a free combination thereof can be used as a wired or wireless information transmission line to be used for transmission or reception.

[0125] The present invention allows a viewer to select the advertisement to be played and to get various services by viewing the selected advertisement. It also allows a commercial sponsor to get a correct picture on the tendency of an advertisement to conform to the taste of a viewer, and to pay the advertisement charge most accurately corresponding to the advertisement actually watched by the end user. Thus, the present invention greatly improves the efficiency of the advertisement business.